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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/831,097	05/03/2001	Michael Zobel	M0-6332/LEA	8436

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EXAMINER

ASINOVSKY, OLGA

ART UNIT	PAPER NUMBER
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1711

12

DATE MAILED: 05/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/831,097	Applicant(s) ZOBEL ET AL.	
	Examiner Olga Asinovsky	Art Unit 1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 11 April 2003.
- 2a) ☐ This action is **FINAL**.
- 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,17,18,20-24 and 26 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-6,17,18,20-24 and 26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/11/03 has been entered.

The amendment to claim 1 is made for excluding a chloroprene monomer and to present the claim 1 more clearly.

No new matter has been added.

The present claims are 1-6, 17-18, 20-24 and 26.

The new search has been made.

Claim Rejections - 35 USC § 112

2. Claims 1-6, 17-18, 20-24 and 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 discloses a polymer prepared from at least one ethylenically unsaturated monomer wherein a said polymer can be a homopolymer having both fine particles having a particle diameter of 0.04 to 1 micron and coarse portions having a particle diameter of from 200 to 500 microns. It is unclear how to

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prepare the homopolymer having the claimed conditions. The examiner presumes that a polymer is a graft copolymer or a mixture of two homopolymers, or the coarse portions are produced by a step of agglomerating of fine particles. Therefore, a polymer prepared from an ethylenically unsaturated monomer wherein a said polymer is homopolymer, having particles having diameter of 0.04 to 1 micron and particles having diameter of 200 to 500 microns is indefinite.

3. Claim 20 recites the limitation "a graft polymer prepared from resin-forming vinyl monomers and a rubber substrate" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim 20. Claim 20 is depending on claim 17 and indirectly on claim 1. There is no graft polymer in claim 1. Claim 1 discloses a homopolymer or copolymer. And, also, the phrase "graft polymer" in claim 20 is not correct. The correct statement is a graft copolymer since the grafting process requires the polymerization of a polymerizable monomer onto a polymer substrate.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-6, 17-18, 20-24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Korte et al U.S. Patent 4,426,499.

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Claim 1 discloses a polymer prepared from at least one ethylenically unsaturated monomer selected from the group consisting of ethylene, propylene, 1,3-butadiene, isoprene, vinyl acetate, styrene, alpha-methylstyrene, styrenes substituted at the nucleus, vinyl cyanides, maleic anhydride, N-substituted maleimides, C1-C8-alkyl acrylates and C1-C8-methacrylates, wherein said polymer is selected from at least one of homopolymers and copolymers, has a mean particle diameter of 0.04 micron to 1 micron, and contains <100 ppm of coarse portions having a mean particle diameter of from 200 to 500 microns.

Korte disclose a process for the production of graft (co)polymers which may be isolated as powders, column 1, lines 58-66 and column 3, lines 60-61. The graft (co)polymers may be used alone as thermoplastic moulding materials, column 4, lines 11-13. The graft (co)polymer can be produced by an emulsion polymerization of monomer(s) in the presence of graft base, column 4, lines 25-35. The graft base= rubber is a latex containing particles having an average diameter of greater than 0.05 micron, preferably from 0.1 to 0.5 micron, column 2, lines 57-59 and column 2, lines 5-6. The polymers used as graft base=substrate for forming graft copolymers and polymerizable monomers are readable in the present claim 1. The polymers modified with rubber by grafting have an average diameter of from 20 to 500 microns, column 2, lines 37-42. The obtained graft (co)polymer can be used with a thermoplastic resin such that the thermoplastic resin forms a continuous phase (matrix) with the free (co)polymer

obtained from the graft copolymerization, column 4, lines 37-45. The polymerizable monomers for forming thermoplastic resins are also readable in the present claims. Korte discloses that the grafting is never complete, they constitute mixtures of the graft polymers and free (co)polymers of the monomers, column 4, lines 13-16. The moulded product can be produced from graft copolymers and thermoplastic polymers, column 4, lines 52-61, for the present claims 17-20. Graft copolymers and thermoplastic polymers are produced in Korte's invention for making moulded products, column 4, lines 57-60.

The difference between the present claim 1 and Korte is that the present claim 1 requires a polymer which can be a homopolymer or copolymer having particles diameter of 0.04 micron to 1 micron and contains \leq 100 ppm of coarse portions having particle diameter of from 200 to 500 microns. It is unclear how to prepare a homopolymer from at least one ethylenically unsaturated monomer having both fine particles having a particle diameter of 0.04 to 1 micron and coarse portions having a particle diameter of from 200 to 500 microns in the present independent claim 1. However, in light of Korte's disclosure, it would have been obvious to one of ordinary skill in the art to consider that a graft copolymer and thermoplastic polymer in Korte's invention can be selected such that a graft copolymer can have fine particle diameter of more than 0.05 micron and upon the graft polymerization of polymerizable monomer and isolating sedimented graft polymer particles having a diameter of from 5 to 1000 microns can be produced, and, thereby, obtain the claimed requirement. Support for that

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can be found in claims 1-6 in Korte. It is the examiner's position that a graft copolymer in Korte can have a fine particle, and upon the continuous polymerization of styrene, alpha-methylstyrene, acrylonitrile, methylmethacrylate and maleic acid anhydride, column 4, lines 37-41, in the presence of the obtained graft polymer, the thermoplastic resins have coarse particles.

Also, the difference between the present claims 21-24 and 26 and Korte is that the present claims disclose a thermoplastic moulding composition comprising polycarbonates, polyesters, polyester carbonates, flammproofing agent, inorganic compound and fluorinated polyolefins. It would have been obvious to one of ordinary skill in the art to consider that the moulded product in Korte can include addition components for obtaining the desired properties of the moulded articles.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-6, 17-18, 20-24 and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Castelnovo et al U.S. patent 3,919,353.

Castelnovo discloses molding composition comprising a matrix (A) and a dispersed graft polymer (B), column 2, lines 3-26. A graft polymer can have

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particle size between 0.03 and 2 microns, column 2, lines 64-68. The particle size of the polyester is lower than 300 microns, column 3, lines 24-25.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olga Asinovsky whose telephone number is 703-308-0041. The examiner can normally be reached on 9:00 to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 703-308-2462. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7718 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Olga Asinovsky
Examiner
Art Unit 1711

C.A.

O.A.
May 13, 2003

James J. Seidleck
Supervisory Patent Examiner
Technology Center 1700